Minh Thang Cao

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Education

Carleton University ***Ottawa, Ontario, Canada***
Bachelor of Computer Science, Co-operative Education Sep 2019 – Mar 2024
CGPA: 3.77 (A+). On annual Dean's Honour Lists from 2019 to 2023.

Experience

Amazon | *Software Engineer Intern* **May 2023 – Aug 2023**
- Developed a size preview on Amazon Seller Central's 1-by-1 item creation experience to help sellers minimize invalid inputs during product listing using React + Redux (TypeScript), Spring Framework (Java) and AWS S3
- Reduced listing error rate and monthly negative feedback on 1-by-1 item listing page by 5% for 2.5M+ sellers
- Built automatic selecting feature for dropdowns, lowered sellers' average time spent to create listings by 3%

Pattern Jobs | *Software Engineer Intern* **May 2022 – Aug 2022**
- Deployed scalable API services using Express.js (TypeScript) with AWS Lambda for data syncing which automates workforce recruitment and management (previously manual), reduced processing duration by 10 times
- Applied new design to the Flutter mobile app by creating an internal UI library with reusable widgets
- Set up automated database migration system on CI/CD pipeline with Docker and Terraform

Kinaxis | *Software Engineer Intern* **May 2021 – Aug 2021**
- Implemented in C++ a cycle detection graph algorithm that combines variances of strongly connected components and cycles enumeration algorithms, enhanced supply planning outputs for over 200 global enterprises
- Improved running time of the application's existing supply chain cycle detection algorithm from over 12 hours to 5 seconds on customer data sets, produced high-quality and detailed cycle data

CU Blueprint | *Volunteer Software Developer* **Sep 2020 – Aug 2021**
Beneficent CRM
- Produced a CRM full-stack application for non-profit organization to manage interest-free loans by allowing clients and hosts tracking applications, contracts and payments using React, Node.js, Express.js and MongoDB
- Helped accelerate the manual application screening and loan distribution, saved over $263,000 of funding

Carleton University | *Undergraduate Research* **May 2020 – Aug 2020**
Closest-pair Doubling
- Explored a divide-and-conquer algorithm that utilizes doubling dimension concept to calculates the closest-pair distance of points on multi-dimensional spaces without knowing coordinates
- Developed from scratch with C++, analyzed and proved the algorithm's logarithmic running time in practice by analyzing the output data and successfully led the original research project to a conclusion

Projects

Connect 4 *JavaScript, React, HTML, CSS, Node.js, Express.js, Socket.IO, MongoDB*
Online real-time Connect 4 game that supports authentication, authorization, in-game chatting and ranking

Software-Defined Vehicle Safety System *C, Python, QNX, Matplotlib, Bash, PythonSimpleGUI*
Real-time OS application that replicates anti-lock braking system and cruise control that utilizes multi-threading and RTOS scheduling, communicates with Python GUI through UDP server to simulate a vehicle movements

Skills

Languages: Python, JavaScript, TypeScript, Java, C, C++, HTML, SQL, Bash
Technologies: React, Redux, Node.js, Express.js, Flask, Sring, CSS, MongoDB, Firebase, WebSockets, React Native, Flutter, Docker, Git, Linux, Matplotlib, AWS, QNX